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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,694	07/15/2003	Sang-Hyun Doh	5000-1-335	7138
33942	7590	08/18/2006	EXAMINER	
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			TARANINA, MARINA Y	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,694	DOH ET AL.	
	Examiner	Art Unit	
	Marina Taranina	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>27 OCT 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Claim 4 recites the limitation "N number of nodes" in line 3. It is not clear if N refers to a number of nodes in the network **before** a new node has been added, or to a number of nodes in the network **after** a new node has been added.

For the purpose of examination, the claim 4 was examined as if N is an number of nodes before a new node has been added.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Ellinas et al. (5,999,288).

(1) With respect to claim 1, Ellinas discloses a method for assigning a predetermined wavelength between two different nodes (111 and 112 in fig. 1) in a wavelength division multiplexing ring communication network (100 in fig. 1, col. 2 lines 17-20) that has an N number of nodes (111-114 in fig. 1) and at least one pair of optical fibers (101 and 102 in fig. 1) sequentially connecting the N number of nodes (111-114 in fig. 1), the method comprising the steps of:

forming a matrix that represents optical-path configuration and wavelength assignment for an N-1 (N_{odd}) number of nodes (col. 7 lines 1-12, 15-19);

extending the matrix by adding a column at any position of the matrix (col. 14 line 10-15) and then assigning X to locations of the added column (col. 13 lines 40-48);

adding an $N/2$ ($L_{\text{max}} = [N_{\text{odd}}-1]/2$) number of rows in the matrix (col. 13 lines 40-48);

tracking along each row toward the left, from the added column, to find a first encountered numeral (col. 13 lines 32-35) and increasing the found numeral by one (col. 13 lines 32-43, col. 14 lines 15-17);
assigning numerals 1, 2, . . . , $N/2$ sequentially to locations corresponding to the added column in the added rows (col. 7 lines 52-53), and assigning X to locations next to the numeral-assigned locations (col. 7 lines 35-41), the number of X-assigned locations being equal to a hop-number (col. 8 lines 45-50) corresponding to the assigned numeral minus 1 ($L_{\max}-1$, col. 8 lines 8-9) lines;
and tracking along each of the added rows toward the right to find an empty location and assign thereto a numeral not used, among the numerals 1, 2, . . . , $N/2$, in the same column as the empty location and assigning X to locations next to the empty location (col. 7 lines 35-63), the number of X-assigned locations being equal to a hop-number (col. 8 lines 45-50) corresponding to the assigned numeral minus 1 ($L_{\max}-1$, col. 8 lines 8-9);
where N being an even number ($N_{\text{odd}}-1$), and X representing that an optical path of the corresponding node is not formed (col. 7 lines 27-29).

(2) With respect to claim 2, Ellinas discloses the method as set forth in claim 1, wherein the step of forming the matrix comprises the steps of:
preparing the matrix (table I, col. 8) having rows and columns, a number of rows being equal to a number of nodes ($N-1$), a number of columns being equal to a lower limit

value W (W_{odd}) of the number of wavelengths required when the number of nodes is $N-1$ (N_{odd});

assigning a set of numerals $[1, 2, \dots, L_{\text{max}}]$ sequentially to locations of a first column of the matrix (col. 8 lines 6-25), while assigning X to a location where no numeral is assigned (col. 7 lines 27-29), and assigning X to locations next to a numeral-assigned locations along each row (col. 7 lines 35-41), the number of X -assigned locations being equal to a hop-number (col. 8 lines 45-50) corresponding to the assigned numeral minus 1 ($L_{\text{max}}-1$, col. 8 lines 8-9);

shifting one by one toward the right in the matrix to assign a rotated set of numerals sequentially to each column (col. 8 lines 6-12), the rotated set of numerals being obtained by rotating a set of numerals used in the previous column, and assigning X to the remaining locations (col. 7 lines 45-60).

(3) With respect to claim 3, Ellinas discloses the method as set forth in claim 2, wherein when the number of nodes is $N-1$ (N_{odd}), a lower limit value W (minimum number of wavelengths W_{odd}) is given by:

$W = [(N-1) \cdot \text{sup.} 2 - 1] / 8$. (col. 6 lines 13-15)

(4) With respect to claim 4, Ellinas discloses a method for assigning a predetermined wavelength between two different nodes (111 and 112 in fig. 1), in case where a number of nodes is increased (col. F in table VII represents an added node), in a wavelength division multiplexing ring communication network (100 in fig. 1, col. 2

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lines 17-20) that has an N number of nodes (111-114 in fig. 1) and at least one pair of optical fibers (101 and 102 in fig. 1) sequentially connecting the N number of nodes (111-114 in fig. 1), the method comprising the steps of:

expressing, by a matrix, optical-path configuration and wavelength assignment of the network before extending the number of nodes (col. 13 lines 15-18);

extending the matrix by adding a column to extend the number of nodes (col. F in table VII represents an added node) at a corresponding position of the matrix (col. 13 lines 28-32) and then assigning X to the added column (col. 7 line 45);

tracking along each row toward the left, from the added column, to find a first encountered numeral (col. 13 lines 32-35), and increasing the found numeral by one (col. 13 lines 40-43), and, if the numeral exceeds a maximum number of hops ($L_{\max} = (N-1)/2$) after being increased, modifying the numeral to a hop-number from a column corresponding to the first-encountered numeral to the added column (see col. C in table VII);

tracking along each row toward the right, from the added column, to find a firstly encountered numeral and assigning, to each row of the added column, a hop-number from the added column to a column corresponding to the firstly-encountered numeral (col. 13 lines 36-39);

and assigning X to an empty location of the added column (col. 13 line 32-50), where N being an odd number, and X representing that an optical path of the corresponding node is not formed (col. 7 lines 27-29).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,963,348 discloses method for assignment of wavelengths channels in an optical bus network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Taranina whose telephone number is 571 270 1085. The examiner can normally be reached on Mon-Fri (alternative Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571 272 2600. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MT



SHUWANG LIU
SUPERVISORY PATENT EXAMINER